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*Multi Nominis Grammaticus*

Studies in Classical and Indo-European linguistics  
in honor of

**Alan J. Nussbaum**

on the occasion of his sixty-fifth birthday

*edited by*

*Adam I. Cooper, Jeremy Rau  
and Michael Weiss*



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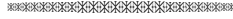


## Table of Contents

Preface .....	vii
Bibliography of Alan Nussbaum .....	ix
List of Contributors .....	xi
<b>Todd Clary</b> , Live Life and Die Death: Case Selection of Cognate Accusatives and Datives in Ancient Greek .....	I
<b>Michiel de Vaan</b> , Latin <i>danunt</i> .....	21
<b>Heiner Eichner</b> , Zur Herleitung von lateinisch <i>ēbrius</i> ‚trunken‘ und <i>sōbrius</i> ‚nüchtern‘ .....	26
<b>Joseph F. Eska</b> , In Defense of Celtic /φ/ .....	32
<b>Margalit Finkelberg</b> , Equivalent Formulae for Zeus in Their Traditional Context .....	44
<b>Benjamin W. Fortson IV</b> , Pre-Italic <i>*-dhiē</i> ( <i>*-dhiēh<sub>1</sub></i> ) versus Pre-Indo-Iranian <i>*-dhiōi</i> : Bridging the Gap .....	50
<b>José Luis García Ramón</b> , Lat. <i>Opiter</i> , OHG <i>aftero</i> ‘later’, PIE <i>*h<sub>1</sub>op(i)-tero-</i> ‘the one after’ and Related Forms .....	61
<b>Guðrún Þórhallsdóttir</b> , Analogical Changes in the History of Old Icelandic <i>fēla</i> .....	76
<b>Olav Hackstein</b> , Indogermanisch <i>*h<sub>1</sub>k̑-ŷ-o-s</i> , <i>*h<sub>1</sub>ek̑-ŷ-o-s</i> ‚Pferd, Hengst, Stute‘: Genusindifferenz als morphologische Persistenz .....	94
<b>Jay H. Jasanoff</b> , The Tocharian Subjunctive and Preterite in <i>*-a-</i> .....	105
<b>Ronald I. Kim</b> , The Indo-European, Anatolian, and Tocharian “Secondary” Cases in Typological Perspective .....	121
<b>Jared S. Klein</b> , Fashioning a Coda: Repetition of Clitics and Clitic-like Elements in the Rigveda .....	143
<b>Alexander Lubotsky</b> , The Vedic Paradigm for ‘water’ .....	159
<b>Melanie Malzahn</b> , Cutting around “ <i>temós</i> ”: Evidence from Tocharian .....	165
<b>H. Craig Melchert</b> , Hittite “Heteroclitc” <i>s</i> -Stems .....	175
<b>Sergio Neri</b> , Zum urindogermanischen Wort für ‚Hand‘ .....	185

Contents

<b>Birgit Anette Olsen</b> , A Note on Indo-European In-Laws .....	206
<b>Holt Parker</b> , Palatalization of Labiovelars in Greek .....	214
<b>Hayden Pelliccia</b> , Aristophanes, <i>Thesmophoriazusaē</i> 148 .....	228
<b>Martin Peters</b> , Send in the Nouns .....	231
<b>Georges-Jean Pinault</b> , The Lady (Almost) Vanishes .....	240
<b>Jeremy Rau</b> , Notes on State-Oriented Verbal Roots, the Caland System, and Primary Verb Morphology in Indo-Iranian and Indo-European .....	255
<b>Elisabeth Rieken</b> , Sekundäre denominale <i>u</i> -Stämme im Hethitischen .....	274
<b>Don Ringe</b> , An Early “Ingvaemonic” Innovation .....	285
<b>Aaron P. Tate</b> , Verse Segments and Syntactic Templates in Homeric Philology .....	289
<b>Richard F. Thomas</b> , Thoughts on the Virgilian Hexameter .....	306
<b>Brent Vine</b> , A Hoarse of a Different Color (Plautus, <i>Poen.</i> 778 <i>rāvīō</i> ) .....	315
<b>Rex E. Wallace</b> , Etruscan Genitives in <i>-a</i> and <i>-al</i> .....	329
<b>Michael Weiss</b> , Interesting <i>i</i> -Stems in Irish .....	340
<b>Kazuhiko Yoshida</b> , Lycian <i>χawa-</i> ‘sheep’ .....	357
Index Verborum .....	363



## Hittite “Heteroclite” *s*-Stems

It is a great pleasure to take part in this tribute to Alan Nussbaum, whom I have known for more than forty years, since the days of “Room B” in Harvard’s Widener Library, and from whom I have learned much about Indo-European. The following essay, offered as a modest token of friendship and esteem, not only builds on work of Alan, but also benefited greatly from his generous and helpful criticism, which in this instance he furnished without knowing where the article would appear. Needless to say, the usual disclaimers apply with particular force in this case.

I argued in Melchert 1994:150–1 that beside the highly productive heteroclite type of neuter verbal action/result nouns in *-eššar*, *-eššn-*, Hittite also attests a more limited number of neuter *s*-stems in *-e/iš*, *-e/iššn-*, i.e. with zero in the nominative-accusative vs. *-n-* in the weak cases: e.g. *tunnakkīš*, *tunnakkīšn-* ‘inner chamber’. Rieken (1999: 386–404 with references) upheld this basic claim, offering a more complete review of the material (including some doubtful cases not discussed here).

As indicated by Rieken (1999:387), the zero/*-n-* class is internally diverse. There are at least two deverbative stems in *-eš-*: *takšēš-* ‘assemblage’ < *takš-* ‘put together’ and *ḫaddareš-* (or *ḫattariēš*) ‘(road) fork’ or ‘intersection’ < *ḫattariye-* ‘to prick’ (with a *ḫattar*-implement). There are likewise at least two denominative stems in *-iš-* from *i*-stems: *dandukīš-*\* ‘mortality’ < *danduki-* ‘mortal’ and *ḫalpriš-* ‘lung’ (beside *ḫalpri-*). Hitt. *kuppiš(n)-* ‘stool’ must also reflect a stem in *\*-is-* in view of CLuv. *kuppiš-*. Hitt. *ateš-* ‘axe, hatchet’ continues a hysterokinetic *s*-stem *\*adb-és-* ‘\*that which cuts’ (thus with Rieken 1999:192–3, modifying Čop, contra Melchert 1994:150).<sup>1</sup> Membership in the *-e/iš(n)-* class is proven by the secondary animate *a*-stem nominative *ateššanaš* (like <sup>GIŠ</sup>*ḫatalkīšnaš* to <sup>GIŠ</sup>*ḫatalkīš(n)-* ‘hawthorn’). A weak stem *\*ateššn-* (with gemination of the *\*s* before a consonant) is also the only way to account for the geminate in the secondary animate stem *atešša-* (of the type of *nepiša-* next to *nepiš-* ‘heaven’).<sup>2</sup>

<sup>GIŠ</sup>*ḫat(t)alkīš(n)-* ‘hawthorn’ is a compound of *\*ḫad-* (cognate with OIr. *ad\** ‘hawthorn’ < PIE *\*h<sub>2</sub>ed(h)-*) and an *s*-stem *\*alkīš-* seen also in Hitt. *alkīštā-* ‘branch’: see

<sup>1</sup>For the root specifically as *\*adb-* see Pinault 2004:142–4, comparing Skt. *svādḥiti-* ‘axe, hatchet’.

<sup>2</sup>There is no gemination of *\*s* after a short accented vowel, contra Rieken 1999:192: see the counterexamples given in Melchert 1994:152. Nor is *ateššanaš* “völlig korrupt.” It is merely another example of the well-attested use of the nominative in a list, despite its syntactic role as a direct object.

Watkins 1993:245–7.<sup>3</sup> One may also with Hoffner (1966:381–2) compare for the basic structure the other plant name *tapalkuštān(a)*-<sup>SAR</sup>.<sup>4</sup> The coexistence of \**alkiš*- and \**alkuš*-, the suffixation by \*-*to*-, and a secondary stem in *-tan*- (undoubtedly reflecting the Anatolian reflex of the PIE “individuating” \*-*e/on-*) is characteristic for Luvo-Hittite: compare *ḫkuništayalli*- beside *kuništallant*- and <sup>d</sup>*Kuništalla*- (with Tischler 1983:633 and 636–7), further *ḫurpašta*-/*ḫurpaštan*- beside *ḫurpušta*- ‘leaf, peel’ (Puhvel 1991:406 with references), and *gulluš*- beside <sup>GIŠ</sup>*gulluštānna/i*- (Starke 1990:117).

The comparison of *ḫurpašta*- with Lat. *uerbēna* ‘twig, leafy branch’ and *-uerbustus* ‘beaten with twigs’ suggests that Anatolian inherited an *s*-stem \**b*<sub>2/3</sub>*werbh-e/os-* ‘bundle of boughs’ (i.e. a small bush or individual boughs tied together, used for flogging). As Alan Nussbaum reminds me, however, Lat. *uerbēna* and *-uerbustus* show possessive semantics, while the Luvo-Hittite stems in *-ta*- mean ‘belonging to, of’: \**alkiš*- ‘bush’ > *alkiš-ta*- ‘branch’; \**ḫurpa/uš*- likewise \*‘bush, leafy plant’ > *ḫurpa/ušta*- ‘leaf’.<sup>5</sup> The Anatolian extensions by \*-*to*- are thus an independent innovation, and we may assume on structural grounds that *alkiš(n)*-\* belongs to our class of heteroclite *s*-stems, as confirmed by the nom.-acc. sg. <sup>GIŠ</sup>*ḫatalkiš* ‘hawthorn’ in KUB 12.44 iii 5.

I am deeply indebted to Alexis Manaster Ramer for having discovered and shared with me his illuminating etymology for Hitt. *alkiš(n)*- (see for a summary of the previous unsatisfactory suggestions Puhvel 1984:36).<sup>6</sup> Manaster Ramer adduces Skt. *algā-*, attested in the dual *algāu* ‘groin’ (see Mayrhofer 1986–2001:1.128 with references). It is clear from the dual that the groin is being viewed as the place where the two legs fork (compare the use of Eng. ‘crotch’ for both humans and trees). We may therefore with Manaster Ramer assume a PIE root \**b*<sub>1</sub>*elg-* ‘to fork, branch’, from which was formed a neuter *s*-stem ‘branching’, concretized in my view to ‘branching plant, bush, small tree’.<sup>7</sup>

Oettinger (1986:30–31 n. 51) already cautiously compared the Hittite type with that of Skt. *āś*\*, *ās-n-ā*, *ās-n-é*, *ās-n-ás* ‘mouth’ (beside pure *s*-stem ablative *āsás* [*āsá á*] and instrumental *āsá* and also loc. sg. *āsán* and *āsáni*). Rieken (1999:386–7 and 403) renews the comparison, although she then confuses matters by citing also Sanskrit and Greek

<sup>3</sup>Old Script acc. sg. *alkištān* argues that the stem *alkištā-* is older than *alkištān*-.

<sup>4</sup>The hapax acc. sg. *ta-pal-ku-uš-ta-na-an*<sup>SAR</sup> in KUB 24.14 i 6 could reflect an animate *n*-stem *tapalkuštān*- or secondary *a*-stem *tapalkuštāna*-.

<sup>5</sup>The secondary use in the sense ‘belonging to’ of a suffix with originally possessive semantics is well attested in Anatolian. The suffix \*-*wén-* becomes the productive means of forming ethnic adjectives in Luvian and Lycian (<sup>URU</sup>*Ninuwa-wann(i)*- ‘of Niniveh’, *Trele-wīn(i)*- ‘of Tralles’). Similarly, \*-*to*- in Lyd. *tesás-ta*- means ‘of the right-hand side’, not ‘having right-sidedness’.

<sup>6</sup>I must add that Manaster Ramer himself holds different views from me regarding the morphology and semantics of the Hittite words containing \**alkiš*-.

<sup>7</sup>This derivation seems to me both formally and semantically superior to that from a root \*(*H*)*elk-* putatively attested in Skt. \**alka-* ‘root tendril’, as contained in the plant name *ryālkasā-*, for which see Mayrhofer 1986–2001:2.592. I personally would keep separate Grk. *λαγώνες* ‘loins, flanks’ and retain its connection with words for ‘soft, slack’. See Chantraine 1968–80:611 and Frisk 1960–72:2.68. The specific meaning ‘crotch’ argues strongly against the proposal of Burrow (1945:83) to connect *algāu* with various Dravidian words meaning ‘loins, groin’ and similar.

infinitives reflecting *\*-sen(i)*. Whatever the status of the latter (see further below), it is clear that the morpheme boundary in the ‘mouth’ type and in the Hittite heteroclite *s*-stems is *between* the *-s-* and the *-n-*, so these can have nothing to do with a putative suffix *\*-ser/-sen-* (for separation of the two see already Nussbaum 1986:198 n. 5).<sup>8</sup>

Rieken’s attempt (1999:403) to derive the attested group of Hittite stems in *-e/iš(n)-* from ordinary proterokinetic *s*-stems is also unsatisfactory, because it cannot explain the variation in the vocalism. If one begins with the directly reconstructable inflection R(é)-S(os), R(é)-S(es)- and assumes leveling of the weak suffixal form *\*-es-* to the strong stem, then Hittite would show only *-iš* from post-tonic *\*-es*, as in *nēpīš-* ‘sky, heaven’ (Melchert 1994:139). If one starts from an internally reconstructed R(é)-S(s), R(Ø)-S(és)- following Schindler (1975a:264–6) and likewise leveling of the weak suffixal form *\*-és-* to the strong stem, one would predict only *-eš* (compare Zucha 1988:229 n. 6).

It is true, of course, that the only examples with *-iš* of clear derivation are secondary to *i*-stems (*\*dandukiš-*, *halpriš-*), but these would never have been attracted to the heteroclite type unless some of the latter had the shape *-iš*. Rieken herself has provided the basis for an explanation in her analysis of <sup>GIS</sup>*karzan-* ‘swift, niddy-noddy’.<sup>9</sup> Eichner (1973:98 n. 78) had derived the word from a virtual holokinetic *\*kért-sōr*, *k(e)rt-sn-* to the root *\*kert-* ‘to turn, spin’. Rieken’s phonological objections to this derivation are not compelling, because final *\*-r* is regularly lost in Anatolian after unaccented vowel (Melchert 1994:87 after Eichner and Yoshida), and *\*kért-sōr* would regularly yield attested nom.-acc. *karza*. Since the word was plurale tantum, there would have been no source within the paradigm from which to restore the final *\*-r*, and the regular result *karza* would have remained.

The problem with the proposed derivation from a *\*-sōr*, *\*-sn-* is not the presumed historical phonology, but rather the very dubious status of a PIE unitary heteroclite suffix *\*-ser/\*-sen-* (see Rieken 1999:386 with references).<sup>10</sup> Nor do Indic and Greek infinitives reflecting a formant *\*-sen(i)* assure the existence of a true suffix *\*-sen* that could be the basis for a paradigm in *\*-sō(n)*, *\*-sn-*. We may therefore follow

<sup>8</sup>I would opt rather for the alternative analysis of Nussbaum, loc. cit., namely that *\*-sen(i)* originated as a locative in *\*-en* to *s*-stems as did both the Sanskrit and Hittite types being discussed, except that no full zero/*-n-* “heteroclite” paradigm was ever created (much less one in *-r/-n-*). See further below in the conclusion.

<sup>9</sup>Meaning thus against Melchert 1999! The word refers to a wooden frame that may come in a wide variety of shapes that assists a single person in winding a skein of yarn (in lieu of the well-known technique of using the upraised arms of another person) and on which the skein can then be conveniently moved around (see the passages I cited). The Hittite plurale tantum reflects that the typical *karzan-* consisted of several assembled pieces. Whether the hieroglyphic sign \*314 (phonetic value likely *ká*) with its three loops may also be interpreted as a kind of swift may be left open.

<sup>10</sup>I am not persuaded by the claim of Jasanoff (2002/3:162–3) that the Greek infinitive (ῥ)ἀγγῆναι ‘to break’ proves the existence of a heteroclite paradigm with a nom.-acc. *\*wagē-sṛ* (i.e. *\*wagēh<sub>1</sub>-sṛ*). The existence of Hitt. <sup>NINDA</sup>*wagešsar* ‘bite-sized bread’ (or similar) is pure coincidence. The meaning argues that it is merely one of the many Hittite deverbative derivatives in *-ešsar* (< *wag-* ‘to bite’).

Rieken (1999:391–2) in deriving <sup>GIŠ</sup>*karzan-* from a heteroclite *s*-stem: virtual *\*kért-s*, *\*k(e)rt-s-n-*. Rieken takes nom.-acc. plural *karz-a* as containing the productive ending *-a* < *\*-eb<sub>2</sub>*. I do not exclude this possibility, but tend to prefer an alternative suggestion from Alan Nussbaum: the Sanskrit *r/n*-heteroclite *áhar*, *áhn-* ‘day’ shows a nom.-acc. plural *áhā(ni)* with the stem of the weak singular. One may thus assume in parallel fashion for our heteroclitic *\*kért-s*, *\*kért-s-n-* a holokinetic *n*-stem plural *\*kért-sō*, which would lead regularly to attested *karza* (compare Old Hittite nom.-acc. plural NINDA *šarāma* to *šarāman-* ‘bread ration’ < *\*-mō*, as seen by Gertz 1982:298–9). Synchronically in fact <sup>GIŠ</sup>*karzan-* with a nom.-acc. *karza* can only be analyzed as an *n*-stem plurale tantum.

As described below, strictly speaking a preform *\*k(e)rt-s-n-* would have led to a Hittite form with anaptyxis and shift of accent: †*karzēn-*. However, the real pre-Hittite paradigm may well have already had a leveled accent and vocalism: *\*kért-s-n-* would have led to the attested *karzan-* (see below on *parš(a)na-* ‘leopard’). Alternatively, the aberrant plurale tantum paradigm *karza*, *\*karzēn-* may have been altered analogically after real *n*-stems.

Taking this reconstruction as a working hypothesis, we may then ask what would have been the outcome in Hittite of such a paradigm to a root ending in a sequence *\*-RT* where *\*T* was not a coronal stop, that is, for a putative *s*-stem *\*h<sub>1</sub>élg-s*, *\*h<sub>1</sub>(e)lg-s-n-* ‘branching plant, bush’. The answer for the nominative-accusative is fairly certain: *\*alkiš*, with the well established anaptyxis in a final cluster *\*-K-s#* seen in preterite third singulars such as *akkiš* ‘died’ < *\*ak-s*, *huvappiš* ‘hurled’ etc. (see Oettinger 1979:41 and Melchert 1994:174). The fate of the weak stem is a far more complicated matter. A complete discussion of consonant clusters and the conditioning for anaptyxis in Hittite is not possible here, but significant improvements can be made to the quite inadequate treatment in Melchert (1994:174–5).

There is evidence to support the conclusion that a prehistoric anaptyctic vowel to the left of the original accent regularly drew the accent and was thereby lengthened in an open syllable, while a post-tonic anaptyctic vowel remained unaccented: contrast *pūmušš-* ‘to interrogate’ < *\*pn(e)uH-s-* (thus with LIV<sup>2</sup> 489 after Harðarson; similarly Oettinger 1976a:95, Eichner 1978:160, Kimball 1999:199) versus *tub-ḫu-uš-zi* beside *tu-ub-ša* ‘cuts off, separates’ < *\*dúh<sub>2</sub>s-* (Oettinger 1976b:133–4 and Kimball 1999:199). Likewise we find *teri-* ‘three’ < *\*tri-* (accent *\*téri-* assured by CLuv. *tarrīyanalli-* ‘third in command’) and *teripp-* ‘to plow’ < *\*trép-* versus *takkišzi* ‘puts together’ < *\*téks-ti*, where the post-tonic *\*e* in a closed syllable regularly becomes *i* (compare Oettinger 1979:41). One may therefore also derive Hittite *paršēna-* ‘hip; cheek’ < *\*persnó/éh<sub>2</sub>* (Oettinger 1982:172 n. 40).<sup>11</sup>

<sup>11</sup>As Oettinger indicates, subsequent syncope of the anaptyctic vowel in the derived verb *paršnā(i)-* ‘to squat’ is unremarkable. Likewise (pace Melchert 1994:175) Oettinger’s derivation (1986:22) of *parš(a)na-* ‘leopard’ < *\*přs-no-* ‘speckled’ (with retraction of the accent in a substantive) does not contradict the pretonic anaptyctic rule just given. On the other hand, his derivation of the stem *pišēn(a)-* ‘man, male’ from *\*pes-nó-*

There is a similar *prehistoric* pretonic anaptyxis in imperfective stems in *\*-ské/ó-* formed from stems in a final consonant, but unsurprisingly the regular retraction of the accent is blocked in this productive formation under pressure of stems without anaptyxis (such as *da-škémi* < *dā-* ‘to take’, *memi-škémi* < *memi-* ‘to speak’, *akku-škéši* < *e/aku-* ‘to drink’, *ari-škémun* < *ariya-* ‘to make an oracular inquiry’). The anaptyctic *\*e* thus appears regularly as *i* in pretonic position (Melchert 1994:139). Contra Melchert (1994:150) and Kassian and Yakubovich (2002:37–40) there are examples to show that prehistorically there was anaptyxis in *all* sequences of *\*-VC-ské/ó-* except those in *\*-Vs-ské/ó-* (the alleged stem *hésike-* to *hašš-/heš-* ‘to open’ does not exist, as shown by Kloekhorst 2008:322).<sup>12</sup> Since Hittite speakers could at any time newly derive the fully productive imperfective stem from the synchronic base, the forms with anaptyxis are subject to replacement at varying stages of the language (see the summaries in Oettinger 1979:318–22 and Kimball 1999:198–9):<sup>13</sup>

(1) Stems in coronal sonorant: *haššikke-* < *ham(a)-* ‘to litigate; judge’ (renewed by *hamiške-* and *hamnaške-*); *ārsike-* < *ārr(a)-* ‘to wash’ (renewed by *ārriške-* and *ārraške-*); *taršikke-* < *tar-* ‘to say’ (renewed by *tar(a)ške-*); *taršikke-* < *tarna-* ‘to release’ (renewed by *tarniške-* and *tarnaške-*).<sup>14</sup>

(2) Stems in coronal sonorant plus *\*s*: *ānšike-* < *ānš-* ‘to wipe’ (renewed by *a-an-aš-ke-* /*anske-*/ and *ānšiške-*); *karšike-* < *karš-* ‘to cut’ (renewed by *kar(a)ške-*).

(3) Stems in coronal sonorant plus stop: reduplicated *mammalzikanta* < *mald-* ‘vow’, cited by Oettinger 1979:322 (always renewed in the base verb as *malz(a)ke-*; likewise only attested is *hu(wa)rz(a)ke-* < *hu(wa)rt-* ‘curse’).<sup>15</sup>

(4) Stems in coronal stop: *azzikke-* < *e/ad-* ‘to eat’ and *hazzikke-* < *hatt-* ‘strike’.<sup>16</sup>

with similar anaptyxis is made problematic by the single *-š-* (see Melchert 1994:174–5) and the Old Script gen. sg. [*p*]išnāš. One should therefore follow the attractive analysis by Zucha (1988:33–4) and Carruba (1993) and assume an original hysterokinetic *n*-stem: *\*pes-én-*, *\*p(e)s-n-*, from which all forms of the attested Hittite paradigm may be derived.

<sup>12</sup>There is no trace of anaptyxis in *\*-ské/ó-* stems built to roots of the shape *\*K<sup>w</sup>(e)R-*: we find only *k(u)waške-* < *ku(e)n-* ‘to strike, slay’ and *kuwar(a)ške-* < *ku(e)r-* ‘to cut’ (later renewed as *kur(a)ške-* and *kuriške-*). We may thus infer that at the time of the prehistoric anaptyxis rule the zero-grade of these stems was still *\*K<sup>w</sup>R-* and thus no anaptyxis occurred. Later, as established by Kloekhorst (2007:456), the sequences *\*K<sup>w</sup>R-ské-* developed regularly to attested *k(u)waške-* (via *\*k(u)wanske-*) and *k(u)warške-*.

<sup>13</sup>A failure to adequately distinguish older and newer forms to the same base fatally undermines the conclusions of the otherwise very useful treatment by Kavitskaya 2001.

<sup>14</sup>For MS *taršiket[teni]* and *taršikkemi* belonging to *tarna-* see Kimball 1999:198 and Kloekhorst 2008:846. I assume with Kimball *\*t<sub>1</sub>(K)nh<sub>2</sub>ské/ó-* > *\*t<sub>1</sub>nské/ó-* and anaptyxis either before or after loss of the *-n-*, contra Kloekhorst. In the case of *(u)wansike-* < *wen-* ‘future’ the expected *\*waššikke-* has had the *-n-* restored from the base verb. For the development of *\*w<sub>1</sub>ské-* > *\*waššikke-* see Kloekhorst 2008:1000 and also 2007, as referenced in note 12 above.

<sup>15</sup>Oettinger’s statement (1979:322) that the anaptyctic vowel never splits the *\*s* of the *-ské-* obviously is a lapsus, since it does in *taršikke-*, *mammalzikanta*, and both *azzikke-* and *hazzikke-*.

<sup>16</sup>Since the archaic *\*d<sub>1</sub>h<sub>1</sub>-ské-* ‘to put’ did not have a preceding syllable and since /*tsC-*/ is an acceptable onset in Hittite (cf. *zašhi/ai-* ‘dream’ [tsx/ai-]), the regular outcome here was OH/OS *zaške-* [tské-] (thus correctly Kloekhorst 2008:808). The standard form *zikke-* is analogical to *azzikke-* etc.



(5) Stems in labial or dorsal stop: *appiške-* < *e/app-* ‘to take’; *terippiške-* < *teripp-* ‘to plow’; *akkiške-* < *akk-* ‘to die’; *hukkiške-* < *huk-* ‘to exorcize’.

(6) Stems in sonorant plus dorsal stop: *linkiške-* < *link-* ‘to swear’, *ḥarninkiške-* < *ḥarnink-* ‘to destroy’, *markiške-* < *mark-* ‘to divide’.<sup>17</sup>

(7) Stems in *-ḫ-* and sonorant + *-ḫ-* : *maniyahḫiške-* < *maniyahḫ-* ‘hand over’; *šanḫiške-* < *šanḫ-* ‘search, seek’. The *i*-vocalism of the anaptyctic vowel here is clearly analogical to the regular outcome of pretonic *\*e* in the other forms as *i*. Compare likewise pret. 3rd sg. *maniyahḫiṣ* after *akkiṣ* etc.

It is entirely unclear to me why the position of the anaptyctic vowel is different after stems in coronals than after those in non-coronals. Any account of this requires a thorough analysis of the general rules of Hittite (and pre-Hittite!) syllabification that cannot be undertaken here. The relevant finding for our immediate problem is clear enough: we predict that in a sequence *\*h<sub>1</sub>(e)lK-s-n-* the anaptyxis would have been between the non-coronal stop and the *\*s*. Whether the normal retraction of the accent in pretonic anaptyxis would have operated undisturbed is less certain.

Mobile accent between root and ending in nominal paradigms is generally recessive in Hittite. However, aside from the isolated archaic neuter noun *aiṣ*, *iṣṣ* ‘mouth’, where OS spellings such as *iṣṣi*, *iṣṣā*, and *iṣṣāz* assure us of a mobile accent, and animate *keṣṣar(-siṣ)* vs. *kiṣrā*, *kiṣrī* ‘hand’, virtually all other evidence for accent shift between root and ending in nouns comes precisely from those with oblique stems in *-n-*: archaic ablauting *tēkan*, *taknī*, *taknāṣ*, *tagnāz* ‘earth, ground’ and *ēṣḫar*, *iṣḫanāṣ*, *iṣḫanī* ‘blood’; *piṣēn-*, *piṣnāṣ* ‘man’ (see note 11 above); *lammar*, *lammī* ‘moment, instant’; *ṣagan*, *ṣaknāṣ* ‘oil, fat’. On the other hand, one may also note that in all of the examples cited the suffix is simple *\*(V)n-*. I know of no evidence for preserved mobile accent between root and ending in nouns with complex suffixes in *-n-*: that is, the types of *mēḫur*, *mēḫun-* ‘time’; verbal nouns in *-war* with gen. sg. *-waṣ* (and related infinitive in *-wanzi* and “supine” in *-wan*); *aṣāwar*, *aṣaun-* ‘sheepfold’; abstracts in *-ātar*, *-ann-*. I leave aside the type of verbal abstracts in *-ēṣṣar*, *-ēṣṣn-* because by one derivation of these the argument would be circular (see appendix).

We may therefore reasonably entertain the possibility that the regular accent retraction applied in the pretonic anaptyxis of *\*h<sub>1</sub>(e)lK-s-n-*, leading to oblique *\*alkésn-* beside nom.-acc. *\*alkis*. We would not expect either this new mobile accent or the vocalic alternation to survive long in such a paradigm, and I suggest that our attested class showing either *-eṣ*, *-eṣṣn-* or *-iṣ*, *-iṣṣn-* results from competing levelings of the irregular paradigm produced by the two different anaptyxis rules, each of which I stress is independently motivated for pre-Hittite. As indicated earlier, the two leveled types then attracted a few stems with original *\*-is-* and *\*-és-* to the inflectional type with weak stem in *-iṣṣn-*.

<sup>17</sup>I am not aware of any examples with root-final *\*-m-* or *\*-mP-*. One would predict anaptyxis between these and the following *\*s* of the suffix.

The PIE status of heteroclite stems in zero/*-n-* remains doubtful. Wackernagel-Debrunner (1954:78) regards the Sanskrit type as an innovation. Nussbaum (1986: 161–2) cites examples beyond Sanskrit, but concludes that the class was modeled after *-r/-n-* and *-l/-n-* heteroclitcs, probably in the history of the individual languages. There are in fact no compelling word equations,<sup>18</sup> and the formal and semantic features of the Sanskrit group (mostly but not entirely *s*-stems, mainly but not exclusively body parts) only very partially overlap with those of the Hittite examples. This mismatch supports the assumption of parallel but independent creations.

Nussbaum (1986:200ff.) argued that Sanskrit *s*-stems in zero/*-n-* were modeled on the *-r/-n-* heteroclite type, starting from locatives in *\*-en*. That the locative singular would be the pivotal form in a set of nouns for body parts is plausible, and the pattern of *āsán(i)* beside *āsnā́*, *āsné*, *āsnás* in ‘mouth’ does bear a striking resemblance to *udán(i)* beside *udná́*, *udnás* in ‘water’ or (aside from the accent) *áhan(i)* beside *áhnā*, *áhne*, *áhnas* in ‘day’.

We know that Hittite did inherit some neuter *s*-stems with zero grade of the suffix: beside *karz(an)-* ‘swift’ cited above there is also *kar-aš* (whose “broken spelling” shows that it was a monosyllabic /kars/), a neuter noun for a type of wheat, reflecting *\*kérh<sub>1/3</sub>-s* ‘grain, fodder’, base of derived hysterokinetic Lat. *Cerēs*, the goddess of grain (Schindler 1975b:63).<sup>19</sup> Since Hittite clearly maintained and even extended heteroclitcs of the *-r/-n-* type, it is unsurprising that it too created on this model a zero/*-n-* inflection of some *s*-stems. While later accretion has left the Hittite class semantically diverse, a pivotal role for the locative is likewise plausible for the two likely oldest examples *\*alkiš-* ‘bush’ and *karzan-* ‘swift’, as well as several of the others: *hattari/eš-* ‘road-fork’, *kuppiš-* ‘stool’, *takšes-* ‘assemblage’, *tunnakkiš-* ‘inner chamber’.

The differences between the Sanskrit and Hittite types are to be expected. In Hittite the word for ‘water’ maintained a very complex ablauting paradigm: nom.-acc. sg. *wātar*, loc. sg. *witeni* (and analogically gen. sg. *witenaš* and inst. *witenit*), archaic inst. *wedand(a)*, nom.-acc. pl. *widār*. This made it (and similar nouns) unsuitable as a model for the *s*-stem class, and hence there is no trace of the *-en* of *witeni* (from old *\*ud-én(i)*) in the *s*-stem heteroclitcs, where the dative-locative singular is *-e/iš-n-i* with *-n-* as in all the other oblique cases. This pattern follows that of the productive *r/n-* stems in Hittite, which likewise show only *-n-*: *-ātar*, *-ann-* < *\*-at-n-*; *-eššar*, *-eššn-*; *-ur*, *-un-*; *-āwar*, *-āun-*.<sup>20</sup> In cases where the *-s* was preceded by a non-coronal obstruent,

<sup>18</sup>Windisch (1894:74–5) cites beside Skt. *dás/dos-ṇ-ás* ‘forearm’ OIr. gen. pl. *doat* to *doē* ‘arm’ < *\*de/ous(V)nt-*, reminiscent of Gk. *ῥῆα-τος* or *ὀνόμα-τος*. However, the chronology of *dos-ṇ-* in Sanskrit is unfavorable to an archaism, and the Old Irish word may just as well contain a genuine suffix *\*-Vnt-*.

<sup>19</sup>This analysis of the Hittite is due to Schindler, class instruction ca. 1976. The existence of *Cerēs* makes it superior to the popular alternative of an otherwise wholly unattested root noun to *\*ǵh(e)rs-* ‘spiky plant’ (Rieken 1999:64, after Hutter; in modified form also Kloekhorst 2008:444–5). Since the word is not attested outside the nominative-accusative, we do not know whether it had an added *-n-* in the oblique cases or not.

<sup>20</sup>Stems in *\*-nr̥*, *\*-nen* did maintain oblique cases reflecting *e*-grade (“supines” in *-wan*, infinitives in *-manzi*), but in this class the development of the gen. sg. *\*-nen-s* to *-was* beside nom.-acc. *-war* would have prevented them from serving as models for the *s*-stems.

the anaptyxis rules described above led to the mildly productive Hittite type in *-e/iš̄*, *-e/iš̄n-*.

## Appendix

See Rieken (1999:385) for a summary of previous proposed accounts of the Hittite abstract/action nouns in *-ēššar*, *-ēššn-*. She herself (1999:403) argues that these are formed from an *\*-és*, *\*-és-n-* type by addition of *\*-r̄* to the nominative-accusative in pre-Hittite, surely after the class in *-ātar*, *-ann-* (< *\*-atn-*) with which they are closely associated.<sup>21</sup> That the entire type in *-ēššar*, *-ēššn-* is a specifically pre-Hittite innovation is shown by the fact that there is no corresponding type in Luvian. One of the great merits of Starke 1990 is to have shown just how robust heteroclitite *r/n*-inflection is in Luvian (see there 433–572), but there is no trace whatsoever of a heteroclitite type in *-Vššar*, *-Vššn-*. This absence also furnishes another reason to doubt the existence—at least in Anatolian—of a complex suffix *\*-s(e)r*, *\*-s(e)n-*.

There remains the question of why the productive type in *-ēššar*, *-ēššn-* shows the accented *e*-grade variant of our originally alternating type in *\*-is*, *\*-ésn-*. Here other factors may have played a determining role. Oettinger (1986:12) already pointed out the coexistence of *dannattēšš-* ‘become empty’ beside *dannattēššar* ‘emptiness’, *parkuešš-* ‘become pure’ beside *parkueššar* ‘purity’, etc. and suggested a denominative origin for the entire class, with the more widespread deverbative type being secondary. This seems unlikely for the *origin* of the type for reasons given above, but the pattern Oettinger identified may have been decisive in promoting the accented *\*-és-* variant.

Beside the denominative type of fientive verb in *-ēšš-* there were also some deverbatives, e.g. *hatešš-* ‘become dry’ beside *hāt-* ‘dry (up)’ (intr.). More importantly, some examples would have been ambiguous as to whether they were deverbative or denominative (see the just remark of Jasanoff 2002/3:147 that at some level the distinction is artificial or at least epiphenomenal). To the root *\*bherǵh-* ‘high’ Hittite attests a *u*-stem adjective *parku-* ‘high’, an abstract *pargeššar*\* (inst. *pargeššnit*) beside better attested *pargatar* and *pargašti-* ‘height’ and verbal stems *park(iya)-* ‘rise; raise’, *parknu-* ‘raise’, *parkiyanu-* ‘raise’ and *pargešš-* ‘become high’. A similar constellation surrounds *palhi-* ‘broad’. Thus an original *\*bhérǵh-s*, *\*bhérǵh-s-n-* would have led as per above to pre-Hittite *\*bárgis*, *\*bargésn-*. The coexistence of *\*bargēš-* < *\*bhérǵh-éb<sub>1</sub>-s-* would have favored generalization in the noun to *\*bargés*, *\*bargésn-*. Then as per Rieken the nominative-accusative was extended in pre-Hittite by *\*-r̄* after the type in *-ātar*, *\*-ātn-*. Furthermore, both *parkeššar* and *pargešš-* may have been reanalyzed as derived from *parku-*, not from the verbal base. This would have led to the formation of unambiguously denominative examples like *dannattēššar* and *dannattēšš-*.

<sup>21</sup>This systematic pre-Hittite addition of *\*-r̄* in the nominative-accusative must be kept quite separate from the very sporadic post-Old Hittite alteration of the zero/*n-* type: e.g. *tunnakkeššar* remade from OHitt./OS *tunnakkiš*.

## Abbreviation

LIV<sup>2</sup> = Rix, Helmut, ed. 2001. *Lexikon der indogermanischen Verben*. 2nd ed. Wiesbaden: Reichert.

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